

**MARK-UP SHOWING THE CHANGES MADE IN THE PREVIOUS CLAIM TO
YIELD THE CLAIM AS AMENDED ABOVE**

3. The process as claimed in claim 1 [or 2], characterized in that the product mixture coming from the cooling means (6) has a temperature of 60 to 200°C and a pressure of 0.5 to 3 bar and is still vaporous.
4. The process as claimed in claim 1 [or any of the preceding claims], characterized in that the feed mixture supplied to the mixing chamber contains hydrocarbons with more than 8 C-atoms per molecule, that the mixing chamber is designed as column with a gas- and liquid-permeable packing, that the feed mixture is supplied onto the upper portion of the packing, and C₄- to C₈-olefins from the feed mixture are evaporated with a partial amount of the steam supplied to the column in the lower portion of the packing and are withdrawn from the column together with the steam.